

## Episode 55: Mother Nature Strikes Again

**Chris Dall:** [00:00:00] Hi, everyone. Just a heads up that we have new Osterholm Update podcast and CIDRAP merchandise available, including mugs, T-shirts and socks. The link is [CIDRAP.umn.edu/shop](https://cidrap.umn.edu/shop). You can find the link in the episode description. Hello and welcome to the Osterholm Update, covid-19, a weekly podcast on the covid-19 pandemic with Dr. Michael Osterholm. Dr. Osterholm is an internationally recognized medical detective and director of the Center for Infectious Disease Research and Policy, or CIDRAP, at the University of Minnesota. In this podcast, Dr. Osterholm will draw on more than 45 years of experience investigating infectious disease outbreaks to provide straight talk on the covid-19 pandemic. I'm Chris Dall, reporter for CIDRAP News, and I'm your host for these conversations. As we've discussed in recent weeks on the Osterholmd Update, the global covid-19 pandemic is nowhere close to being over. Global covid-19 cases and deaths have started to plateau after climbing for weeks but remained at an extraordinarily high level. India continues to experience horrific rates of infection, and now several South and Southeast Asian countries, some of which had appeared to have the virus under control, are starting to see unprecedented surges. Meanwhile, here in the United States, the vaccines appear, at least at the moment, to be winning the race against the variants with cases, hospitalizations and deaths continuing their steady decline as millions a day receive shots. As a result, many states are eyeing the end of whatever coronavirus restrictions still remain in the coming months. But as that light at the end of the tunnel gets brighter, the question of what the end game is for the coronavirus here in the US starts to loom larger. That's one of the issues we'll be tackling on this May 13th episode of the Osterholmd Update as we take stock of the pandemic here in the United States and around the world. We'll also discuss the CDC's new stance on how covid-19 spreads, answer a listener question on the FDA's authorization of the Pfizer covid-19 vaccine for teens, and share our latest listener act of kindness. But first, we'll begin, as always, with Dr. Osterholm's opening comments and dedication.

**Michael Osterholm:** [00:02:16] Thank you, Chris, and thanks to all of you for being with us here again this week. We so appreciate your participating in these weekly updates. It's a real treat for us to not only do these, but also to hear from you about what we did. And you have done that in spades this week. As you may recall, last week, I asked if you would, in fact, send us your comments about how we might improve this podcast.

We always know we can get better. I'm reminded constantly by those close to me and who do love me that I can do better. And so we all welcome the input that we've gotten this week. And it has been substantial. I think most of all, I just want to thank you for the kindness of the input, thoughtful, some cases with really good suggestions about what we might do better, but always thoughtful. And so thank you very much for being with us. This week, I want to dedicate this podcast to something that I think every one of us on this podcast have come to know one way or another. That is the world of divided families, divided friends, divided colleagues, and in some cases even divided strangers. What am I talking about? I'm talking about that issue of what covid has done to, in some cases, eliminate the dinner table as a place of joyous conversation and discussion. It's family events where people have a hard time talking to one of their sibs or one of the cousins because of the issues around covid. This has happened time and time again to any number of us. And it's frustrating. It's challenging, it's hurtful. And in each instance, we wonder why. Why? Well, I don't know why. I can tell you that, as I've shared once before with you on this podcast, I had the opportunity to have a conversation with a well-known civil war historian who told me a few months ago that for the first time in his life, he had become to understand what it must have been like for fathers and mothers to see half their sons go fight for the north and half fight for the south. And so today, this podcast is dedicated to all of us, all of us who have experienced that division between friends, family, colleagues, and even, as I said, strangers sometimes just walking down the street. Wearing your mask in a store. Let's hope that this dedication doesn't have to be made in the future. Let's hope that, in fact, we can heal not just the body from the virus, but our hearts and souls from the virus, too. Now, I just have to move on here. I know we've had the comments about whether people enjoy, appreciate, or in some cases find rather boring, the light issue. But come on, we're really getting close to a major celebration right now in terms of the amount of light we have. We have to enjoy it while we can. So I am going to share with you on May 13th here in Minnesota, Minneapolis/St. Paul, I'm happy to report to you we're going to have 14 hours and 46 minutes of sunlight. We've gained 15 minutes since last week. Note that for those who are following this, the number of minutes that we increase our light length every week is actually growing smaller as we get closer to that summer solstice. But I'm also happy to report we are now at 5 hours and 59 minutes of additional sunlight than we we're back in December. So enjoy it.

**Chris Dall:** [00:05:49] As I noted in the intro, the global situation remains fairly dire, mainly in India, but now increasingly in other parts of Asia. So two questions here. India's government has been reluctant to shut down, but with the limited amount of vaccine, do they have any other choice? And also, what is your take on what's happening elsewhere in Asia?

**Michael Osterholm:** [00:06:09] We are seeing what I would call the next unexpected leg of this pandemic. And what I mean by that is, is that, again, we had been convinced, based on our recent history, that whatever was going on in Asia didn't involve us and the rest of the world. I heard it many times. India, the Philippines, Vietnam, Cambodia. All of those areas had very limited activity for so many months, and whatever it was, they were doing it right. I heard theories about how Asians somehow might be uniquely immune to this virus. I mean, they were just all kinds of hypotheses out there explaining it. And, you know, the one explanation that everybody somehow forgot to consider is? She's called Mother Nature. It's a situation where we don't know why we were spared these very major surges of cases in these areas. But now they're there. In terms of looking at what's happening right now globally, we are still almost at that peak of cases that first occurred at 5.7 million new cases reported a week to the WHO some three weeks ago. This week, we're right about 5.5 million cases. We know the cases are substantially underreported in India, for example. So whatever that real number is, it's a big one. If one looks today, we are seeing in India basically continued record highs with the latest seven day average for new cases at 388,000 cases a day. Pressure for a nationwide lockdown continues to grow. We do know that 24 of India's 36 states and union territories have imposed restrictions and 19 are under total lockdown. The country has now resorted to the recruitment of former army medics to help keep parts of the overwhelmed health care system afloat. We are hearing of many reports now of bodies washing up on the shores of the Ganges River, presumed to be the result of rising demand and pricing for cremations. When we look at what's happening in terms of the virus, and I'll talk more about this in a moment, we are beginning to see that B1617 and B1617.2 both are variants that have emerged in India, and I'll be talking more about those, but the point is, is that it's really too early to determine what role B1617 is playing in India's surge. But preliminary data suggest it's more transmissible than the previously circulating virus and there are surely some evidence of potential immune evasion. Public Health England and international partners are now investigating B1617 to understand does it cause more severe disease or that vaccines are less effective. At

this point, WHO has stated we don't have anything to suggest that our diagnostics or therapeutics or vaccines don't work. But this is an important consideration. In India's neighbor Nepal, cases and deaths are growing exponentially, prompting authorities to extend a lockdown in Kathmandu and surrounding districts until the end of the month. Although the country's prime minister announced that the situation in Nepal was under control, this past weekend there were numerous reports on the ground painting a very, very different picture. The seven day average for new cases on May 10th was about 8625. Just a month ago, on April 10th, the seven day average was about 280. Test positivity rates recently hit 44 percent in the country, where hospitals are already at capacity and experiencing major oxygen shortages. We are seeing now major impacts even on the Mount Everest expeditions as the number of ill individuals being airlifted off the mountain is growing each and every day. In addition to both India and Nepal, Sri Lanka is experiencing a record high surge in cases and deaths, causing them to impose major travel restrictions. If we look at other countries in Asia and the Middle East, Malaysia has now ordered a national lockdown in effect until June 7th as the cases there continued to spike. Vietnam, which has been widely praised for its handling of covid, is now reporting a rapidly spreading outbreak there. And with Taiwan, which has been known for its comprehensive and what appears to be very effective response in limiting transmission on the island, has now raised their alert level based on 15 new cases reported yesterday. They have banned large events and limited hospital visits. And finally, we have to include Japan since this is the soon to be home of the World Olympics. And it's fair to say that the Olympics very well may be challenged in terms of their ability to be conducted. Japan's Osaka region is reporting a major rise in covid deaths at home due to a shortage of critical care beds. And we're seeing lots of reports to the public becoming more critical of the government's response, especially as cases rise there just ahead of the Olympics. Let me just briefly update the Latin American situations. Many of the countries there continue to report very significant activity. Brazil is still reporting an average of more than 60,000 cases and 2,000 deaths a day. And although the average number of deaths in the country has dropped by more than 780 over the past three weeks. Uruguay is now reporting a slight uptick after having seen a decline for several weeks. The country has the second highest average number of new daily cases per capita in the world, only behind India. Other countries in the region reporting significant activity include Argentina, Costa Rica and Colombia. In Europe, it's good news to say their lockdowns are easing in parts of Europe as infection rates fall and vaccination levels rise amid hopes of summer travel. For example, UK's restrictions

ease as of Tuesday, with people able to start getting pints inside of pubs again. Of note, on Monday of this week, the UK reported just 4 total deaths, all of which were from Wales. No deaths recorded in England, Scotland and Northern Ireland. Finally, just in Africa, I want to note that we are watching a number of countries very closely. The latest weekly health emergencies report from WHO show that, in fact, 11 countries are now experiencing increases over the past seven days, including South Africa. So let me just summarize the international experience here to say that I don't know what else India can do. At this point, we don't have much more to offer them. Surely the amount of vaccine and the speed at which it can be administered is such that they're not going to be able to have much impact on this current surge over the course of the next four to eight weeks by vaccine alone. It's going to take the kind of measures of what we unfortunately call the lockdown. Trying to limit people's contact with each other. And short of that, I don't think there is much else we can do. And this is one of the challenges of dealing with this virus once we hit this kind of exponential growth surge phase, there isn't much to do except limit as much human contact as we can to try to break that infection cycle. So stay tuned. India has, unfortunately, many, many more cases and deaths ahead of it at this time.

**Chris Dall:** [00:13:27] There's an interesting situation going on in the Seychelles, which is an archipelago of islands in the Indian Ocean. The Seychelles have vaccinated a higher proportion of its population than any other country, but is struggling to contain the new surge of infections. Do we have any idea of what's going on there?

**Michael Osterholm:** [00:13:44] If I could run with a theme tonight, Mother Nature strikes again. I think that this is one of those humbling experiences where when we think we know how to control this virus and we have actual demarcations saying, if I just hit this line here, I hit this line here, I will know that I'm OK. And then we find out we're not. And I'll come and add some context to that because I don't want people to feel like all is lost. It's not at all. But when you look at what's happened in the Seychelles, as you noted, this is an island country with 98,000 people. They have the highest proportion of their population vaccinated in the world. 131 doses have been administered per 100 residents, 70 percent have received at least one dose and 61 percent are fully vaccinated. However, they've drawn this international attention due to a recent record high surge in COVID cases in the country that seemed to take off in late April. The rolling seven day average of new daily cases rose from 120 on April 30th to 314 on May

8th. We may now, in the last two days, having some suggestion of a break in the increase in those cases. But I think it's too early to say. According to the Health Ministry there, 37 percent of the cases have received both doses of the vaccine. However, 80 percent of covid hospitalizations in the country are among those who are unvaccinated. Note remember how many I said were vaccinated? 70 percent have received at least one dose. 61 percent are fully vaccinated. To date, 57 percent of the fully vaccinated residents have received Sinopharm vaccine produced by the Chinese and recently granted emergency licensing by the WHO. The remaining 43 percent have received Covishield, which is the AstraZeneca vaccine being produced by the Serum Institute of India. Now, from what data we have and the recent approval by WHO supports that these are quite highly effective vaccines. WHO this week indicated that there was approximately 79 to 80 percent efficacy against symptomatic illness with this vaccine and similar percentage efficacious against hospitalization. Now it is good news that no covid deaths have been reported in the country since April 30th when two were recorded. However, the uptick in cases here has prompted the country to implement restrictions, including bans on household gatherings and school closures and really, in a sense, a partial to in some key locations, lockdown. I just want to remind people here that these vaccines, both the Sinopharm and the Covishield, may not have quite the same effectiveness as an mRNA vaccine, but they're close and they're surely what's been used in Europe with AstraZeneca in England very successfully. And so we can't just say that is a problem with the vaccine. What this is really telling us is this virus, as infectious as it can be, even with only a smaller percentage of the population susceptible, still can sustain a surge of cases. And there should be a lesson for all of us when we're sitting here in the United States feeling really good about our 55 or 60 percent protection with one dose. 30/35 percent protection with two doses. We still have a long ways to go to get to a level of protection that would avoid what the Seychelles is experiencing. Again, I think our vaccines overall are slightly better. But this is a wake up call. Don't declare victory too soon. And that's what I think. There's a real lesson of the Seychelles.

**Chris Dall:** [00:17:35] So that brings us to the US, where the seven day average of new daily cases is hovering around 40,000, the lowest it's been since September and declining. And governors around the country are ready to fully open things up this summer. So given what's going on in the rest of the world and the fact that there will be

a substantial number of vaccine holdouts in this country, can we expect this decline to continue? And what role will the variants play in this picture?

**Michael Osterholm:** [00:18:03] This is very good news. Make no mistake about it, we are for the first time in eight months, our covid cases are less than 12 new cases per 100,000 population. That's incredible. That's great. Let's celebrate it. But what could happen from here on out? And I think that's the challenge we're running into right now. If we look at this in terms of what's happening, we've had nine states and the District of Columbia reported less than 10 deaths due to covid-19 in the past week. That includes Alaska, Vermont, Wyoming, Alabama, the District of Columbia, Hawaii, Maine, North Dakota, Nebraska and Rhode Island. Congratulations. According to The New York Times, 36,451 cases were reported in the US on May 10th, with a 29 percent decrease in cases over the previous 14 days. Hospitalizations are down 15 percent. Deaths are down 8 percent. Louisiana has experienced a 14 day increase in cases of 15 percent and 3 percent in hospitalizations. Montana has experienced a 14 day increase in hospitalizations of 29 percent. But interesting, they've had a 14 day decrease in a number of cases. However, if we look at places in the United States with the highest number of daily cases per capita, based on a seven day rolling average, we still are high. Michigan's at 27 per 100,000. Colorado is at 23 per 100,000. And Minnesota is at 22 per 100,000. Maine at 21 per 100,000. So we still have these areas with some increased occurrence of cases, others which appear as if the virus in a sense, is almost disappearing. So let me just conclude this part of our discussion today with saying we have very good news in the United States. The question is, can we sustain that? And if we can't, what will that look like? If we can, how will we do it? And I think it's the race between vaccine and the variants. And we really need to have that discussion of what are we going to do to get more and more vaccine into people's arms and at the same time hold the variants at bay. So as we go through our discussion here, Chris, I think this is going to be a defining moment of whether or not we see continued decrease in cases in what some would consider to be substantial control, or is this a temporary respite, much like we saw last year when we'd go three and four months without much activity in a given area, and then all of a sudden a spike in cases? We know vaccine is here. We know vaccine has been administered, but like the Seychelles, what does that bode for us? And I think that's the discussion we need to have.

**Chris Dall:** [00:20:50] So in my introduction, Mike, I brought up that question of what the end game is for covid-19 here in the United States. So have you thought about what that is? And you just talked about it a little bit, but we're not going to vaccinate everyone in this country. So there will likely continue to be some transmission of this virus. Does there need to be a public conversation about how much transmission is acceptable and what living with the virus looks like?

**Michael Osterholm:** [00:21:17] We have just gone through the better part of 17 to 18 months of learning how to die by this virus. That has been such an incredible challenge. As I say, each and every week those people have died are not numbers. They're not statistics. They're our loved ones. They're our fathers, our mothers, our brothers, our sisters, our colleagues, our friends, our neighbors. We can never forget that. But when we look at where we're going from here, we also have to remember that those same people I just talked about but who are still alive could very well be one of those numbers down the road. So what does this mean? Well, you know, the past 15 months or so have been dominated by a rapid, often reactionary response to this virus. I said in the early days that we need to approach this like we'd approach a chess game, strategically anticipating moves of the virus and even the unanticipated consequences. Moving forward, our public health strategies need to be based on strategic outcomes, even though in many cases there are so many unknowns remaining. I, for one, have said to you as honestly as I can that there are days I'm certain I know less about this virus now than I did six months ago, particularly before the variants arrived. I think the same is true when I talk about why cases surge and why they don't. Can anyone here really tell me why Michigan surged like it did when Indiana, a state adjacent to it with much lower vaccination levels did not also catch on fire? Why? There was no border patrol that kept the virus from going south. Why did India go for all those months with minimal activity until all of a sudden it literally blew? So I think that one of the challenges we have right now is we have to understand that there is the unexpected. Don't let anybody tell you they can tell you exactly what's going to happen with this virus. In a sense, we're really combining some limited experience with this virus to date with what we anticipate this virus will do. So let me just ask, what is our future? What are we going to do? How does containment work? What kind of mitigation strategies are we going to talk about or take? These have very specific meanings in public health, but boy, are they interchangeably used by the public. To the public mind it's about can I go in public and socialize with all my friends? Can I go to my work? Do I have to wear that damn mask?



That's pretty much what it's boiled down to. Well, let me just kind of give a perspective here. If we look at influenza and we look at the median number of deaths, this is kind of the 50 percent level, 50 percent below 50 percent kind of a bug level, and the CDC has estimated the number of deaths each year with flu from 2010/11 season to the 2019/20 season, 10 years worth of data. And the median number of deaths during that time was 38,000 deaths a year due to influenza. That's about 104 deaths a day. If we get down to 100 deaths a day with covid-19, will we say, well, it's like influenza? Do we shut down buildings other than sometimes schools? Will we, in fact, limit the attendance to certain events or how many people can be in a restaurant or in a bar? Will we tell churches they can't hold services? Or if they do, they have to hold them outside and everyone has to be at least 10 feet apart? I'm not asking these questions rhetorically, I'm asking these questions from the standpoint is how are we going to reconcile our lives we're living right now with the lives we want to and can live in the future? And we have to have this discussion. I'm not proclaiming to be the expert to say we should do this or do that or don't do this or don't do that. What is the goal of any jurisdiction and how is covid-19 control defined that way? I think from my perspective, what we finally defined it as is just maintaining hospital capacity and the ability to care for sick patients, covid and otherwise, even during surges. To me, that seemed as if that were the strike point of where we did all of our actions to make sure that that didn't happen, where we tried to limit it when it did. Are we trying to reduce the total number of covid-19 cases? Are we trying to be like those locations in Asia where any cases are unacceptable? And whatever means need to be taken to limit that, that will be done. Are we trying to eliminate symptomatic disease, saying, oh boy, our goal is to have no symptomatic cases? So in a sense, we have not yet defined who and what we are, what do we want to be? Do you want to go to a public venue and sit next to someone and wonder, oh my God, are they infected or not? Or do you want to go to a venue that has required everyone to show proof of vaccination? And, you know, you're sitting next to a stranger, but you have a reason to believe they've truly been vaccinated. Do you feel safe being in public spaces, going out to eat again? Some of you absolutely will say, sure I do, I'm vaccinated. Others will say, well, you know, there have been these breakthrough cases and I don't know if I feel safe or not. Part of the problem we have right now, we're in a world of churn. We don't know what we don't know. And because of that, we're confused and in some cases even frightened about what to do. There are those who say, damn the torpedoes, everything's back to normal, let's go for it. And there's others that are still afraid to come out of their house even if they've been vaccinated. So I think

at this point, we really are at a time of having this discussion, even with all the rest of the world with where it's at. And even though we could have more surges in the United States, what are we trying to do? How will we do it? Is it acceptable to X number or Y number of people in our society? And what will it mean? I've already shared on this podcast I don't believe herd immunity is a possibility. I've given all the reasons why that I think that we can surely do a lot to control this virus. We surely are seeing case numbers decrease now. But we won't hit herd immunity, so what does that mean? Well, I still don't know, based on our previous experience last year when we went months and some of the states with little to no activity, just like we've seen in Asia. And then all of a sudden house on fire. Just think of the southern Sunbelt states. In July, they were a house on fire. Quieted down substantially such that by September through December, very limited activity. Can you say some of it was due to human mitigation? I don't know how much was, but look what happened at the end of December and January, they were again a house on fire. Now, humans didn't really make that happen as such. We surely were the vehicles for which this virus moved from person to person. But the point of it was something in Mother Nature did that, made those big spikes and then those rapid decreases. So I think if I leave you with anything today on this topic, it's that please we have to have these discussions. I will continue to push as hard as I can to get more people vaccinated. I worry very, very much that we have at least 13 states that are still around 50 percent or less of the state's population, even with one dose and six that are below 45 percent. If you look at where those states are clustered, you can see that there are some substantial challenges there in terms of what that might look like. Today, despite the fact that 34 percent of our population is fully vaccinated, 46 percent with one dose, even with those numbers which appear large, there are still large numbers of people in many states that are not. The states of Idaho, Wyoming, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Tennessee, they have among the lowest numbers of people vaccinated in the country. Now, is that not at least other than Idaho and Wyoming, those other states, isn't that just a regional house on fire waiting to happen? I hope not. I hope Mother Nature doesn't do it, but I don't know why Mother Nature wouldn't do to them what it did to Michigan and Minnesota. So we have to understand that we're still there trying to get that understanding. At the same time, we also want to live our lives. We want to move forward. So my recommendation at this point is, one, keep, keep, keep vaccinating. Do what we have to do in these states. Please get people vaccinated. It's unacceptable at this point if you even look at the population of those over 18 years of age, only 44 percent are fully vaccinated. Only 58 percent have at least

one dose. Remember the Seychelles. Remember that. And while they may have had vaccines that weren't quite as good as ours, they were still pretty darn good. So we've got work to do. We're not out of the woods yet. Do not allow yourself to be lulled into a false sense of security because some politician decides at 70 percent, we're done with one dose. And when I say one politician, this is not aimed at anyone. I see so many governors, this administration where they're shooting for a goal. They want us to get there. It's aspirational. Thank you. But we can't let that be interpreted if we just hit that number, we're done. We're not. So from this perspective and what I see happening right now with a variants and how they are continuing to increase, we have to understand that it's going to be a very, very long road ahead when we've got to get more people vaccinated.

**Chris Dall:** [00:31:25] Last week on the podcast, you discussed the WHO updating its position on how covid-19 is transmitted and at the end of last week the CDC followed suit. Can you talk about the significance of that move by the CDC and why it took so long?

**Michael Osterholm:** [00:31:42] Well, this seems to be the week that everyone wants to dump on the CDC. Let me just say at the outset, CDC is the public health halter in this country. It's critical. It's important. We all want a strong and capable CDC and there are many dedicated professionals there who I have such respect for, such admiration. They have been leaders in public health globally, nationally, even locally for decades. But the CDC has to understand they've had some real messaging messages lately. And one of them was this whole issue around the means of which this virus is transmitted. I have to admit that I have been part of a group that has been actively pursuing the changes at the federal level and our understanding of how this virus is transmitted and what we must do about it. We have wasted so much effort and so much money on hygiene theater where we have made people feel as if the whole world around them was contaminated with this virus. And as such, many of them actually lived in some fear of that. We know that's not true. We also know that aerosols, those tiny little particles, those things like the person who's walking down the street smoking a cigarette, you suddenly smell 20 feet away or I'm in a room, 30 by 30 foot room, and I can instantaneously smell it as soon as those cigarettes lit, that's an aerosol. That's a very dynamic process with which these viruses can move in closed spaces. So CDC does have to acknowledge this challenge. As of today, they have updated their website, but

there are still many places on their website where they talk about respiratory droplets and they talk about this idea of six feet. And that's all. We have to understand that we have to update our recommendations, because we have workers who every day are in the public setting, essential workers who don't have a choice whether to go to work tonight or sit at home behind their computer, and protecting them from aerosols should be job one for us which speaks to the kind of ventilation they need in their buildings and speaks to the kind of respiratory protection they have. So this is not just an academic debate. I'm glad the CDC has updated their data. I think this has been a very important point. But why it took a year, I don't know. CDC has to understand these shortcomings. And it's not just on this issue. I have to go through multiple issues right now. Masking and the idea of what protection you get, but also what does it mean to be outside? I do feel like, you know, the CDC has gotten a little bit of a bum rap, not completely, when they talk about the 10 percent of cases are associated with transmission outdoors. Then a lot of people piled on the last day and said, oh, no, no, no, it's less than 0.1 percent. Well, I don't think we quite know. And what I mean by that is it's not the 10 percent. Absolutely not I think that's an overestimate. But I think right here in Minnesota, we have examples of what I'm talking about. You know, we've had an outbreak that occurred at a large outdoor concert in July of 2020 here where hundreds and hundreds of people got together at festivities that lasted about three hours. These were all individuals outdoors, closely, closely located to each other, listening to music. And subsequently, 31 cases were reported attending this outdoor concert. More importantly, they were from four different families. Genetically, the viruses were the same. And the evidence, I think, is quite compelling since then most of them had onset of illness within four days of the concert, which is exactly the incubation period we expect to see. Now, these people were outdoors, but they were packed together like sardines. So I think that these kinds of events probably have happened more frequently than has been understood. So don't go and just say outdoor air is perfectly safe. At the same time, if people are walking in parks, if people are not crowded in like sardines in a can, then at that point that's a very different environment. And we can, in fact, use that outdoor air to our advantage for people to get together, for people to be in that space without masks on. So at this point, I just hope the CDC can take a look at itself and not just ask the question about how do I respond to this specific challenge in terms of information sharing, but what process do we have at the agency for updating their recommendations? How are we going to have confidence in them in what they're saying? How relevant is it? You know, I'm not asking them or I think anyone is to be making recommendations based on the pressure of

politics or public relations. But there is a better way right now for them to come up with the kinds of understanding and recommendations that the public sees that makes sense and at the same time takes the best science. It should never have taken the CDC or the WHO a year to understand the basic science of aerobiology. It should never have happened and we can't let that happen again.

**Chris Dall:** [00:37:12] There is some vaccine news earlier this week from the FDA which announced that it's updating the emergency use authorization for the Pfizer/BioNTech vaccine to include 12 to 15 year olds. Your thoughts on that decision, Mike?

**Michael Osterholm:** [00:37:25] This is great news, we're all excited about lowering the age at which kids can get this vaccine. The data from this study was quite compelling in terms of looking at both the protection of the vaccine against clinical disease. There were no cases among the 1005 vaccine recipients and 16 cases among the 978 placebo recipients. In a sense, the vaccine was 100 percent effective. Now, let me just say that that's not going to be the way it will be in everyday life. When it gets into the field, we're going to see a slightly lower number than that. We always do. The other data that were very compelling was the immune response to the vaccine that was studied in 190 participants 12 to 15 years of age, and their response was compared to the immune response of 170 participants 16 through 25 years of age. And they found they were similar. So we are really excited about the availability of this vaccine. Our next challenge is going to be parents and their willingness to get their children vaccinated. That has to be a critical effort on our part to see that that happens.

**Chris Dall:** [00:38:32] That brings us to a listener email from Jenny, who's a family nurse practitioner. And Jenny wrote, "I spent a decent amount of time last week preparing for the rollout of the vaccine in the 12 to 15 year old age range. Not only does this age group open the vaccine up for one of our sons, it also opens it up for lots of his friends and plenty of my patients. So I want to be prepared. But what strikes me is the sample size. Just over 1,000 12 to 15 year olds received the Pfizer vaccine, while 900 received placebo. This seems like a rather small sample size. How does it compare to the adult trials? I realize trials for children are much more difficult, especially with a respiratory virus that has caused a pandemic. But are we moving too fast? Here to be clear, I have worked for the local health department and I am very passionate about

public health. I trust the science behind the mRNA vaccine and do not foresee a difference in response from kids to adults. But what data can I look to for reassurance? I want as much safety data as possible to provide to my clients, friends and family and to be honest, and I'm struggling to find it." And just to note here, the actual numbers in the trial were 1131 in the vaccine group and 1129 in the placebo group. But Mike, to Jenny's question, too small a sample size?

**Michael Osterholm:** [00:39:46] Well, it's a great question and it's one that is on the minds, I think, of many parents as well as some health professionals. So thank you for that thoughtful question. First of all, we have to remember that we have now administered over 261 million doses of this vaccine to people in the United States. That is by itself a remarkable accomplishment. Most of this is, in fact, the mRNA vaccine as the J&J vaccine was just a small part of that. I think that right there speaks to safety, we have no reason to think that 12 to 15 year olds are going to be different than 15 to 18 year olds necessarily. We want to be sure that we study that in terms of how well they respond. And do they, in fact, have the immune response that would be protective. And as I just shared in the previous question and answer, yes, we found that to be the case. This vaccine was highly effective in them. And so I'm quite confident at this point that the safety data that has been accumulated with this smaller trial just confirms what the other data from the previous trials, as well as the widespread use of the vaccine have confirmed. These vaccines are quite safe. So, Jenny, I thank you for the question. I want to encourage you to say that have your children get vaccinated, your neighbor's kids, everybody you can think of. And that I'm very confident in the safety of these vaccines based on this massive roll out of doses in all ages older than 15 and I am certain that based on the studies that are ongoing right now, we will see that the vaccine is quite effective and is quite safe in even children less than 12 years of age.

**Chris Dall:** [00:41:33] Now to our latest act of kindness. Mike, can you share it with our listeners?

**Michael Osterholm:** [00:41:38] This act of kindness comes from Shannon. We very much appreciate her sharing an event that happened to her folks that actually had all the markings of tragedy and turned out to be, in a sense, a community love story. Shannon wrote, "The final thing I wanted to share was an incredible act of kindness shown to my folks. Their home of 32 years was destroyed in a house fire this past

September. While they got out safely and were able to move their vehicles out of harm's way, the 100 plus year old farmhouse was completely destroyed. But an incredible thing happened. While the heat of flames consumed and destroyed their home, the warmth of love and community provided for their every material need. Within a 12 hour period, they had clothes on their back, they had food in their bellies and a roof over their heads for as long as they needed it. And that was just the start of the outpouring. For two months, they continued receiving food, clothes, essential household items, other things as such from friends, family and total strangers. My dad jokes that they're dressed better now than they were before the fire. In a world where it seems we focus more on human depravity than human kindness, these acts of love toward two people I adore bolstered my faith and hope in the goodwill that still exist in this place. It has also reminded me that none of us are an island. We desperately need each other. After all, what is life without people in it? Thank you for letting me share. Warmly, Shannon."

Shannon, I'm so glad to hear that your community has come to the loving aid of your folks. And as tragic as that fire might have been, I'm sure you lost many personal items of great value. But there is more good in more people than we can ever imagine. And I think you have helped us all understand that that's the case today. Thank you, Shannon, for sharing this very thoughtful act of kindness. It really does demonstrate there is so much good in people. And I'm happy for your parents that, in fact, they are now where they're at, despite having had this fire and probably losing a number of very valuable personal items. And boy, are they lucky to have you as a daughter. Thank you.

**Chris Dall:** [00:44:02] And to our Osterholm Update listeners, please keep those acts of kindness coming in. You can email us at [OsterholmUpdate@umn.edu](mailto:OsterholmUpdate@umn.edu). Your closing thoughts today, Mike?

**Michael Osterholm:** [00:44:14] Well, I've kind of been all over the map today. First of all, I've talked about the challenges we're seeing on an international level and the dire, dire conditions that are occurring in many countries right now. I've talked about the optimism of what's happened in the United States, whether that is fully justified based on the level of vaccination we have, I think is still a big question. I'm afraid this virus is not done with us yet, but we have to appreciate that we are at a very different stage today in this pandemic here than we were just a few short months ago. I also realize we are at a crossroads in understanding what are we going to do in the future? What will happen? What role will the variants play? Will we start to see these new variants with

greater transmission potential able to potentially evade immune protection, whether it is only in a minor way or in a major way, we don't know. But we have a lot of unknowns ahead of us. We're not out of the woods yet. And no politician, no local leader can declare pandemic over until the virus is defeated. It won't matter what we say. It only matters what the virus does. But having said all of that, today, we need a good feeling. We need to celebrate. We need to recognize we've been through a lot. We're not done yet. But you know what? We still have a lot of good in this world and Shannon just shared that with us. So I picked a closing tune that, again, I've used before, another oldie but goodie. It was one that I played on Stop Swapping Air back last November. It's a song written by Bob Thiele and George David Weiss. In 1967 it was released as a single, it topped the pop charts in the U.K., but it did very poorly in the US because the president of ABC Records disliked it and refused to promote it. However, some 11 years later, in 1988, it was included as a soundtrack of Good Morning Vietnam, and as such, it quickly jumped to the top of the Billboard Top 100 and stayed there for some time. It was actually elected into the Grammy Hall of Fame in 1999. Of course, the song I'm talking about was sung by the great Louis Armstrong. And the words that I hope we all can feel today, What a Wonderful World. 'I see trees of green red roses, too. I see them bloom for me and you. And I think to myself, what a wonderful world. I see skies of blue and clouds of white, the bright, blessed day, the dark, sacred night. And I think to myself, what a wonderful world. The colors of the rainbow, so pretty in the sky are also on the faces of people going by, I see friends shaking hands saying, how do you do? They're really saying, I love you. I hear babies cry, I watch them grow. They'll learn much more than I'll ever know. And I think to myself, what a wonderful world. Yes, I think to myself, what a wonderful world. Oh, yeah.' Thank you again for spending your week with us on behalf of the entire podcast family, we're so appreciative that you would. This week is one that I started out hoping that we could bridge the divide that has surely been a part of our world over these past 17 months. And I closed with a song that reminds us it's still a wonderful world. And everything in between. What was sandwich was the complexities of the current pandemic. What can we do about it? What should we do about it? How do we look at it? How do we wonder? Are we doing better? Are we doing worse? All challenges that we have before us, but they are challenges that we can deal with that are in our control. So I just thank you again so much for being with us. Thank you for your kind words, for your very thoughtful critiques. Just remember, this is the week to be kind. This is the week to be patient. This is the week to



be safe. And of course, this is the week to go out and get two more friends to get vaccinated. Thank you very much.

**Chris Dall:** [00:49:07] Thanks for listening to this week's episode of the Osterholm Update. If you're enjoying the podcast, please subscribe, rate and review and be sure to keep up with the latest covid-19 news by visiting our website [CIDRAP.umn.edu](https://cidrap.umn.edu). The Osterholm Update is produced by Maya Peters, Cory Anderson and Angela Ulrich.